

# Rawan Al Ghofaili

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## EDUCATION

### CORNELL UNIVERSITY

#### MENG IN COMPUTER SCIENCE

May 2014 | Ithaca, NY

GPA: 3.25 / 4.0

### KING SAUD UNIVERSITY

#### BS IN INFORMATION TECHNOLOGY

June 2011 | Riyadh, Saudi Arabia

First Class Honors

Cum. GPA: 4.87 / 5.0

Major GPA: 4.95 / 5.0

## LINKS

Github: [RawanMG](#)

LinkedIn: [rawanmg](#)

## COURSEWORK

### GRADUATE(PHD)

Intro. to Bioinformatics

Computational Fabrication

Machine Learning

Computer Graphics

Mobile Sensing

Numerical Computation

### GRADUATE(MASTERS)

Foundations of Artificial Intelligence

Practicum in Artificial Intelligence

Open Source Software Engineering

Architecture of Large Scale Information Systems

Intro. to Computer Vision

Intro. to Natural Language Processing

Intro. to Analysis of Algorithms

### UNDERGRADUATE

Intro. to Database Systems

Database Management Systems

Network Management Systems

Web Engineering and Applications

Management of Health Info. Systems

Information Security

Operating Systems

## TEACHING

Computational Photography

Object Oriented Programming in Java

## EXPERIENCE

### CORNELL UNIVERSITY | RESEARCH INTERN

June 2014 – Aug 2014 | Ithaca, NY

- Trained and Visualized a style and scene classifier using 2,831,689(training) + 26,700(visualization& validation) images extracted from [houzz.com](#). An extension of **OpenSurfaces**. Supervised by **Professor Kavita Bala**
- Extracted features from the pretrained ImageNet model and trained an SVM to classify the images
- Trained a Convolutional Neural Network to classify images with an accuracy of 16.74%
- Visualized the Neural Network's last three layers to discover feature sets

### MONGO DB | OPEN SOURCE CONTRIBUTOR

Jan 2013 – May 2013 | Ithaca, NY

- Implemented Mongo-tools, a browser application to allow easy entry for beginners to MonogDB with a GUI. Worked in a team of 14 spread across the US, Poland and China
- Implemented MongoDB database management solutions using Ruby on Rails and JQuery
- Developed tests with RSpec

### KING SAUD UNIVERSITY | TEACHING ASSISTANT

Nov 2011 – June 2012 | Riyadh, Saudi Arabia

- Taught Computer Programming 1 and 2 (Java) to 40-120 students
- Evaluated students, provided feedback on their performance, prepared homework solutions, lesson review and graded quizzes
- Tutored underperforming students by providing further examples to improve their understanding and answer any questions they might have about the material

### KING SAUD AND TAIBAH UNIVERSITY | PROGRAMMER

June 2011 – Sept 2011 | Riyadh, Saudi Arabia

- Developed a game for the publication "Interactive Screening for Learning difficulties in Arabic Speaking Children" (The Children with SpLD screening project)
- Applied in a number of Saudi public schools for research purposes
- Implemented game style quizzes with Visual Basic .NET from feedback provided by HCI and Special Education experts in a subteam of four within a team of 16
- Developed nine games testing linguistic learning abilities and provided maintenance after installation

### RIYADH GOOGLE DEVELOPER GROUP (GDG) | CO-FOUNDER & MANAGER

Mar 2011 – Jul 2012 | Riyadh, Saudi Arabia

- Acted as the main contact with Google MENA and GDG leaders and obtained support and promotion in Google MENA's social media sites
- Organized events, workshops and hackathons covering topics like: Google App Engine, Android mobile development and Google's Cloud platform with attendees ranging from 20-120 local developers, headhunters and technology enthusiasts
- Landed sponsorship by Badir Incubators and STC(Saudi Telecom Company) by writing proposals to incubators and potential sponsors
- Events were covered in Saudi newspapers as well as several Saudi blogs

## SKILLS

### PROGRAMMING

Over 5000 lines:

C++ • Java • VB.NET • Matlab • JavaScript

• JQuery • Python • Rails • PHP  
• LaTeX • MySQL • HTML

Over 1000 lines:

CSS • Ajax • Assembly

Familiar:

Android

### LANGUAGES

Native or bilingual proficiency:

English • Arabic

## RESEARCH INTERESTS

Computational Fabrication • Computer Graphics • Computer Vision •

Computational Photography • Machine Learning

## RESEARCH & PROJECTS

### VISUAL COMPUTING LAB Jan 2016 - Nov 2016

Extracted forces produced during an **OpenSim** upper-extremity biomechanical model simulation of pronation and supination. Truss structure optimization on the aforementioned forces was developed and executed to produce the orthopedic cast structure necessary to support the fractured arm. **Professor Emily Whiting**

### VISUAL LEARNING GROUP

Jan 2015 – March 2015 | Hanover, NH

Experimented with training a convolutional neural network to produce estimated depth maps from single view images. This was done by implementing an RBF layer in **Caffe** and using features extracted from **PlacesCNN** to facilitate learning.

Supervised by **Professor Lorenzo Torresani**

### CREATIVE MACHINES LAB

Jan 2013 – Dec 2013 | Ithaca, NY

Developed an adaptive neurocontroller for Aracna(a 3D printed quadruped robot). Gaits were evolved on a Linux cluster using HYPERNeat, represented as textual feedforward neural networks and executed on the robot's Raspberry Pi using a Python script. Supervised by **Professor Hod Lipson**

### INTELLIGENT MUSIC PLAYLIST

Aug 2012 – Dec 2012 | Ithaca, NY

Implemented a Machine Learning algorithm to recognize a user's taste in music using data collected from his/her Last.fm profile and produce a playlist from his/her music collection

### ADAPTIVE SMART QUESTIONNAIRE APPLICATION (ASQA)

Aug 2009 – June 2010 | Riyadh, Saudi Arabia

In a team of six, used Apriori data mining algorithm to extract a knowledge base from raw data collected from a survey. Running the questionnaire based on the association rules stored in the aforementioned knowledge base, resulted in a system that produces a short and relevant questionnaire tailored for each individual.

## AWARDS, ACTIVITIES & PUBLICATIONS

2015 Awarded a faculty member(Lecturer) scholarship from King Saud University, which includes stipend, health insurance and travel expenses

2014 King Abdullah University of Science and Technology(KAUST) outstanding student award

2014 Saudi Cultural Mission(SACM) award for excellence

2012 Junior member of Tamouh ("A community of hand selected achievers. A platform that enables leaders from all fields in the GCC to collaborate and realize their own potential.")

2010 Participated as a researcher (with 2 papers) in the KSU 2nd Student's Scientific Symposium (KSUSSH)

2010 Rawan Alghofaili (2010). Guidance in Wardriving and Methods of Detection (Arabic), King Saud University Center of Excellence in Information Assurance (COEIA)